

HAPPEX Parity Violation Experiments at Jefferson Lab

D. S. Armstrong

College of William & Mary, Williamsburg, VA. 23187

The HAPPEX program of measurements of parity-violation in elastic electron scattering, in Hall A of Jefferson Lab, will be presented. The results and implications of the recently completed measurement on the proton at $Q^2 = 0.48 \text{ GeV}^2$ will be briefly reviewed. The status and plans will be presented for the upcoming HAPPEX II measurement on the proton at $Q^2 = 0.1 \text{ GeV}^2$, as well as the upcoming companion measurement with a ^4He target at the same momentum transfer. These experiments are sensitive to strange quark contributions to the vector structure of the nucleon. The two new experiments will provide a precision measurement of the strangeness radius parameter, however the combination of the two experiments will also provide information on the strange contribution to the proton's magnetic moment.